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Brendan M. Donohoe

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CARDICA, INC.

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EXAMINER

BUI, VY Q

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* BRENDAN M. DONOHOE, THEODORE M. BENDER,  
BRIAN R. DUBOIS, SCOTT O. CHAMNESS, STEPHEN A. YENCHO,  
JAIME S. VARGAS, NATHAN H. WHITE, GREGORY B. ARCENIO,  
HEATHER L. KLAUBERT, and RUSSELL C. MEAD, JR.

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Appeal 2009-008688  
Application 10/054,745  
Technology Center 3700

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Before JENNIFER D. BAHR, JOHN C. KERINS, and  
FRED A. SILVERBERG, *Administrative Patent Judges*.

SILVERBERG, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

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<sup>1</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, or for filing a request for rehearing, as recited in 37 C.F.R. § 41.52, begins to run from the “MAIL DATE” (paper delivery mode) or the “NOTIFICATION DATE” (electronic delivery mode) shown on the PTOL-90A cover letter attached to this decision.

## STATEMENT OF THE CASE

Brendan M. Donohoe et al. (Appellants) seek our review under 35 U.S.C. § 134 of the final rejection of claims 1-15, 17-31, 33-39 and 51. We have jurisdiction under 35 U.S.C. § 6(b).

We REVERSE.

## THE INVENTION

Appellants' claimed invention is directed to creating an opening in a wall of a blood vessel by a cutter and a piercing member positioned within the cutter (Spec. 1: 15-16 and Spec. 8: 2).

Claims 1 and 17, reproduced below, are representative of the subject matter on appeal.

1. A tool for making an incision in and removing tissue from a vessel wall, comprising:
  - a cutter; and
  - a piercing member positioned within said cutter, wherein said piercing member and said cutter are configured to translate together to penetrate the wall of the vessel.
  
17. A surgical tool for removing tissue from the wall of a vessel to create an opening, comprising:
  - a rotatable cutter;
  - an auger assembly fixed to and substantially coaxial with said cutter, said auger assembly comprising an auger at its distal end;
  - an actuator connected to at least one of said auger assembly and said cutter.

## THE REJECTIONS

The following rejections by the Examiner are before us for review:

1. Claims 1-6, 8-14, 17-31, 33-39<sup>2</sup> and 51 are rejected under 35 U.S.C. § 102(b) as being anticipated by Hougen (US 3,825,362, issued Jul. 23, 1974).
2. Claims 1, 7 and 15 are rejected under 35 U.S.C. § 102(b) as being anticipated by “St. Jude Medical, Instruction for use” (published “on or around Aug. 2000”<sup>3</sup>) (hereinafter “St. Jude Medical”).

## ISSUES

The issues before us are: (1) whether the Examiner erred in finding that both Hougen and St. Jude Medical describe a piercing member and a cutter configured to translate together to penetrate the wall of a vessel, as called for in independent claim 1 (App. Br. 4, 6), and (2) whether the Examiner erred in finding that Hougen describes an auger assembly fixed to a cutter, as called for in independent claim 17 (App. Br. 7).

## ANALYSIS

### *Rejection of claims 1-6 and 8-14 over Hougen*

Claim 1 recites, *inter alia*, that “said piercing member and said cutter are configured to translate together to penetrate the wall of the vessel.”

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<sup>2</sup> In the Examiner’s Answer, claim 34 was indicated as being both rejected and objected to (Ans. 4). However, in the Final Rejection, claim 34 was only indicated as being rejected (Final Rejection 2-3). Thus, we find that the indication of claim 34 as being objected to in the Examiner’s Answer was a typographical error. Accordingly, we will treat claim 34 as being rejected in our analysis.

<sup>3</sup> The publication date has been provided by Appellants on pages 11-12 of a communication filed Feb. 16, 2006.

The Examiner found that the Specification “does not explicitly define the meaning of the phrase ‘translate together’” (Ans. 6).

Appellants contend that “the claimed phrase ‘translate together’ means that the piercing member and the cutter . . . are fixed [to one another] with respect to translation, but not with respect to rotation (App. Br. 4, citing to Spec. 3, 21-22 and Spec. 8: 17-19).

Appellants’ Specification describes that “the auger 6 and cutter 4 are configured to translate together at the same rate in the axial direction, but are free to rotate independently of one another, . . . [t]hat is, the auger 6 and the cutter 4 are fixed axially, but independent rotationally” (Spec. 8: 13-19) (emphasis bolded).

Thus, we conclude that the claimed phrase “translate together to penetrate the wall of the vessel” means that a piercing member and a cutter must be fixed to move together axially when the tool penetrates a wall. *In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004) (When construing claim terminology in the United States Patent and Trademark Office, claims are to be given their broadest reasonable interpretation consistent with the specification, reading claim language in light of the specification as it would be interpreted by one of ordinary skill in the art.)

Appellants contend that Hougen does not describe that the piercing member and the cutter are configured to translate together to penetrate the wall of a vessel, as called for in independent claim 1 (Reply Br. 4, App. Br. 4). In support thereof, Appellants contend that in Hougen, the pilot pin 42 progressively retracts as cutter 14 advances into the workpiece, that is, the pilot pin 42 and the cutter 14 translate in opposite directions to cut a hole in the workpiece (App. Br. 5).

The Examiner found that in Hougen, the

cutter 14 and auger/spike/piercing member 42 [are]  
configured to translate together to penetrate the  
wall 12 because a user of the Hougen  
device/assembly will move/translate the  
device/assembly including cutter 14 and  
auger/spike/piercing member 42 in a direction  
substantially perpendicular to the surface of wall  
12 to cut the wall.

(Ans. 6) (emphasis bolded).

The Examiner found “that during a translation movement of [the]  
Hougen device before contacting wall 12, cutter 12 [*sic*, cutter 14] and  
auger/spike/piercing member 42 are axially fixed one to each other because  
there is substantially no relative motion between cutter 14 and  
auger/spike/piercing member 42” (*id.*) (emphasis bolded).

Hougen describes that:

[r]eferring to FIG. 3, when it is desired to cut a  
hole in workpiece 12 the rotating spindle 40 is  
advanced axially so that shank 32 of arbor 16 is  
rotated and advanced axially toward the work.  
Initially the pointed end 72 of pilot pin 42 engages  
workpiece 12 since it projects axially beyond  
cutting teeth 58. . . . As the arbor advances axially  
toward the workpiece pilot pin 42 progressively  
retracts as cutter 14 advances into the workpiece.

(col. 3, l. 54-col. 4, l. 2, and fig. 3).

We find that in Hougen, while the pilot pin 42 and the cutter 14  
translate together before a hole is cut in a workpiece; the pilot pin 42 and the  
cutter 14 translate in opposite directions *when a hole is cut in a workpiece*.  
Thus, we find that in Hougen, pilot pin 42 and the cutter 14 are not

configured to translate together *to penetrate the wall of the vessel*, as called for in independent claim 1.

We reverse the rejection of independent claim 1, and dependent claims 2-6 and 8-14, over Hougen.

*Rejection of claims 1, 7 and 15 over St. Jude Medical*

Appellants contend that St. Jude Medical does not describe that the piercing member and the cutter are configured to translate together to penetrate the wall of a vessel, as called for in independent claim 1 (App. Br. 6).

The Examiner found that in St. Jude Medical, Figures 14 and 15 show a device as recited in the claims (Ans. 4).

Appellants contend that in St. Jude Medical (citing to Figures 13-15), the advancement of the cutter takes place while the needle is substantially stationary, which means that the needle and the cutter translate relative to each other, and not together (App. Br. 6).

We find that in St. Jude Medical, after the needle is moved to engage the inside wall of the aorta, the cutter is advanced through the aorta until the hole is complete (p. 7, figs. 14-15). Thus, the needle and cutter do not translate together and do not penetrate the vessel at the same time.

Accordingly, we find that in St. Jude Medical, the needle and the cutter are not configured to translate together *to penetrate the wall of the vessel*, as called for in independent claim 1.

We reverse the rejection of independent claim 1, and dependent claims 7 and 15 over St. Jude Medical.

*Rejection of claims 17-31, 33-39 and 51 over Hougen*

Claim 17 calls for, *inter alia*, an auger assembly fixed to a cutter.

Appellants contend that Hougen does not describe an auger assembly fixed to a cutter, as called for in claim 17 (App. Br. 9).

The Examiner found that “[a]s to independent claim 17, the same reasoning for the rejection is applicable” (Ans. 7). As set forth *supra*, the Examiner found that “[cutter 14] and auger/spike/piercing member 42 are axially fixed one to each other because there is substantially no relative motion between cutter 14 and auger/spike/piercing member 42” (Ans. 6) (emphasis bolded).

As we found *supra*, in Hougen, while the pilot pin 42 and the cutter 14 translate together before a hole is cut in a workpiece; the pilot pin 42 and the cutter 14 translate in opposite directions when a hole is cut in a workpiece (col. 3, l. 54-col. 4, l. 2, and fig. 3).

We find that Hougen’s pilot pin 42 and cutter 14 are not axially fixed to each other. We find that the lack of any relative axial movement between Hougen’s pilot pin 42 and cutter 14 prior to a hole being cut in a workpiece does not mean that the pilot pin 42 and the cutter 14 are axially fixed to each other since the pilot pin 42 and the cutter 14 are capable of moving relative to each other as shown by their movement in opposite directions when a hole is cut in a workpiece.

Thus, we find that in Hougen, pilot pin 42 and the cutter 14 are not fixed to each other, as called for in independent claim 17.

We reverse the rejection of independent claim 17, and dependent claims 18-31, 33-39 and 51, over Hougen.



### CONCLUSIONS

The Examiner has erred in finding that both Hougen and St. Jude Medical describe a piercing member and a cutter configured to translate together to penetrate the wall of a vessel, as called for in independent claim 1.

The Examiner has erred in finding that Hougen describes an auger assembly fixed to a cutter, as called for in independent claim 17.

### DECISION

The decision of the Examiner to reject claims 1-15, 17-31, 33-39 and 51 is reversed.

### REVERSED

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